



JURNAL OF MEDIKA CENDIKIA
Volume 12 Number 02 Year 2025
ISSN Print: 2355-827X / Online ISSN: 2442-4412
Karsa Husada Health Sciences Institute Garut

**THE EFFECT OF BUTTERFLY HUG ON ANXIETY AND STRESS LEVELS
AMONG FINAL-YEAR STUDENTS AT KARSA HUSADA HEALTH SCIENCE
COLLEGE GARUT IN 2025**

Angga Dipa Nagara^{1*}, Tanti Suryawantie², Andhika Lungguh Perceka³, Jafar Muhamad⁴

¹Diploma of Nursing Study Program, Karsa Husada Health Science College Garut

^{2,3,4}Bachelor of Nursing Study Program, Karsa Husada Health Science College Garut

Corresponding Email: anggadnagara@gmail.com



This is an open access article under the CCBY-NC-ND license

Received: June 15th 2025, Revised: June 18th 2025, Accepted: June 22st 2025

ABSTRACT

Final-year students frequently experience anxiety and stress due to academic pressure related to the completion of scientific papers. If not managed appropriately, these conditions may negatively affect students' mental health and academic progress. Butterfly Hug is a simple self-administered relaxation technique performed by crossing the arms over the chest and tapping alternately, producing a calming effect through bilateral stimulation. This technique is easy to perform, requires no equipment, and can be applied in various situations. This study aimed to determine the effect of Butterfly Hug on anxiety and stress levels among final-year students at Karsa Husada Health Science College Garut in 2025. The research design employed a one-group pretest–posttest design without a control group, involving 15 respondents selected using Simple Random Sampling (SRS). The instruments used were the Hamilton Anxiety Rating Scale (HARS) to measure anxiety and the stress subscale of the DASS-21 to measure stress. The intervention was conducted consistently and in a structured manner for four days with initial guidance from the researcher. Data analysis using the Wilcoxon Signed Ranks Test showed a significant reduction in anxiety and stress levels. The significance values were 0.001 for anxiety and 0.002 for stress ($p < 0.05$), indicating that Butterfly Hug had a significant effect in reducing anxiety and stress. Therefore, this therapy is expected to serve as an alternative self-intervention that students can utilize to maintain mental health while completing scientific papers.

Keywords: *Butterfly Hug, Anxiety, Stress.*

INTRODUCTION

Final-year students face numerous pressures, one of which is completing their final project (Perceka, 2020). The final project is a scientific paper prepared by undergraduate and diploma students based on research findings and serves as a graduation requirement for university study programs (Saifuddin et al., 2018).

Anxiety is an unavoidable aspect of life and often arises when individuals face pressures that exceed their ability to cope (Perceka et al., 2021). Anxiety disorders reported among university students are estimated at approximately 50% globally, while in Indonesia the prevalence of anxiety disorders among students is estimated at 3.7%. There are many factors contributing to anxiety disorders in students, including academic and non-academic factors such as significant academic pressure, financial problems, peer competition, achievement demands, homesickness, social problems, and irregular sleep patterns. Anxiety can also lead to physical health problems, such as increased cortisol secretion and increased consumption of sweet, low-nutrient foods (Haidar, de Vries, Karavetian, & El-Rassi, 2018).

Anxiety disorders have become one of the most significant global mental health issues, particularly in urban areas characterized by high levels of life stress. According to data from the World Health Organization (WHO), more than 264 million people worldwide experience anxiety disorders, and this number continues to increase along with the growing complexity of modern life. Individuals with anxiety disorders often exhibit symptoms such as excessive worry, panic attacks, and sleep disturbances, which ultimately negatively affect overall quality of life (Muslimahayati & Rahmy, 2021).

A study conducted by Zurrahmi et al. (2021) involving 18 final-year students showed that 61% of respondents experienced moderate stress and 17%

experienced severe stress. Among students with moderate stress, 73% were found to have poor sleep quality, while 75% of those in the severe stress group also experienced sleep disturbances. Meanwhile, Jusuf et al. (2022) reported that 5 out of 10 students from the Public Health Study Program at Gorontalo State University (class of 2018) experienced stress triggered by academic pressure, particularly related to final project completion. Another study by Agusmar et al. (2019) found that 87.5% of students from the 2015 cohort at the Faculty of Medicine, Baiturrahmah University, experienced moderate stress

Anxiety and stress have tangible impacts on students' conditions, including sleep disturbances and decreased appetite. To cope with these conditions, students reported attempting various methods such as listening to music, exercising, practicing breathing relaxation techniques, sleeping, or watching Korean dramas. However, despite these efforts, all respondents stated that their anxiety and stress levels did not decrease significantly. This phenomenon indicates the need for a more effective approach to help students manage anxiety and stress. One method with potential positive effects is the Butterfly Hug technique, which has been scientifically proven to reduce anxiety.

METHODS

This study employed a quantitative research approach, using numerical data. The research design was a one-group pretest–posttest design, which is classified as an experimental study. This method falls under quasi-experimental research. The design involved a single group receiving pretest and posttest measurements without a control group (Zainurridha et al., 2024).

The population of this study consisted of final-year students at Karsa Husada Health Science College Garut, totaling 476 students. However, the accessible population was 475 students, as one student was the researcher.

The sample size was determined to be 15 respondents, in accordance with guidelines for simple experimental research. According to Sugiyono (2017), simple experimental studies may involve 10–20 participants per group, and in practice 10–30 participants are acceptable, provided that external variables are strictly controlled and research instruments are valid and reliable.

The study was conducted by the researcher with the following procedures: preparing informed consent documents for respondents; distributing data collection instruments in the form of questionnaires; and providing instructions on how to complete the questionnaires.

To measure the effect of the Butterfly Hug on anxiety and stress levels, the Wilcoxon Matched Pairs Signed Ranks Test was used as a non-parametric test to examine differences between pretest and posttest scores for the anxiety and stress variables.

RESULTS

Table 1. Frequency Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	6	40.0%
Female	9	60.0%

Based on Table 1, most respondents were female (9 respondents; 60.0%), while male respondents accounted for 6 individuals (40.0%).

Table 2. Frequency Distribution of Respondents' Anxiety Levels

Variable	Frequency	Percentage (%)
Before Intervention		
Mild Anxiety	2	13,3%
Moderate Anxiety	3	20,0%
Severe Anxiety	10	66,7%
Total	15	100%

After Intervention		
No Anxiety	0	0%
Mild Anxiety	4	26,7%
Moderate Anxiety	11	73,3%
Severe Anxiety	0	0%
Total	15	100%

Based on Table 2, prior to the intervention, most respondents experienced severe anxiety (10 respondents; 66.7%). A total of 3 respondents (20.0%) experienced moderate anxiety, and 2 respondents (13.3%) experienced mild anxiety. After the Butterfly Hug intervention, anxiety levels decreased. No respondents experienced severe anxiety, and the majority (73.3%) were categorized as having moderate anxiety (11 respondents). A total of 4 respondents (26.7%) experienced mild anxiety. No respondents were categorized as having no anxiety after the intervention.

Table 3. Results of the Wilcoxon Statistical Test

Variable	Z	p-Value
Anxiety (Y1 pretest-posttest)	-3,436 ^b	,001
Stress (Y2 pretest-posttest)	-3,051 ^b	,002

Based on Table 3, statistical analysis using the Wilcoxon test showed that the p-value for anxiety was 0.001 and for stress was 0.002. These values are smaller than the predetermined significance level of 0.05. Therefore, H_0 is rejected and H_1 is accepted, indicating that there is an effect between variables. Thus, it can be interpreted that there is a significant difference before and after the Butterfly Hug intervention in anxiety and stress levels, indicating that Butterfly Hug effectively reduces anxiety and stress among final-year students at Karsa Husada Health Science College Garut.

DISCUSSION

Based on data analysis of 15 respondents selected using Simple Random Sampling (SRS), most respondents were female (9 respondents), while 6 were male.

The majority of respondents were from the Bachelor of Nursing Study Program (9 respondents), followed by the Diploma III Midwifery Program (5 respondents) and the Diploma III Health Analyst Program (1 respondent).

The results showed that prior to the Butterfly Hug intervention, most respondents experienced severe anxiety (66.7%). After the intervention, anxiety levels decreased to moderate anxiety (73.3%) and mild anxiety (26.7%). This reduction in anxiety levels was supported by bivariate analysis using the Wilcoxon test, which showed that the mean anxiety score decreased from 29.53 to 20.47, and the median decreased from 31 to 21.

These findings were further supported by the fact that all respondents experienced a decrease in anxiety scores (negative ranks), with no respondents showing increased or unchanged scores. This indicates that the Butterfly Hug intervention was effective in reducing anxiety levels. The statistical test also showed a p-value of 0.001, which is smaller than 0.05, indicating a significant difference in anxiety levels before and after the intervention.

Regarding stress, similar patterns were observed. Data analysis showed that most respondents were female (9 respondents) and the majority were from the Bachelor of Nursing Study Program (9 respondents), followed by the Diploma III Midwifery Program (5 respondents) and the Diploma III Health Analyst Program (1 respondent).

The results indicated that prior to the intervention, most respondents experienced very severe stress (53.4%). After the Butterfly Hug intervention, this proportion decreased to 20.0%, with 60.0% of respondents categorized as having severe stress and 20.0% categorized as having moderate stress. The mean stress score decreased from 19.87 to 17.07, and the median decreased from 20 to 17.

Further analysis showed that 12 respondents experienced a decrease in

stress scores (negative ranks), 2 respondents experienced an increase (positive ranks), and 1 respondent showed no change (ties). The Wilcoxon test yielded a p-value of 0.002, which is smaller than 0.05, indicating a significant difference in stress levels before and after the Butterfly Hug intervention.

CONCLUSION

The Butterfly Hug intervention has a significant effect on reducing anxiety and stress levels among final-year students at Karsa Husada Health Science College Garut.

RECOMMENDATIONS

Based on the findings of this study on the effect of Butterfly Hug on anxiety and stress levels among final-year students at Karsa Husada Health Science College Garut in 2025, educational institutions, particularly study programs are encouraged to provide education or brief training on stress and anxiety management techniques such as Butterfly Hug. This approach may contribute to improving students' overall mental health.

REFERENCE

- A. Batari Ola, Juanda, H. (2019). Kecemasan Tokoh Utama Dalam Novel Napas Mayat Karya Bagus Dwi Hananto (Pendekatan Psikoanalisis Sigmund Freud). *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Abdullah, D., Amelia, R., purnama dewi, N., tetivani, A., & Kedokteran, F. (2024). Efek Pemberian Lilin Aromaterapi Pada Pengobatan Gangguan Cemas: a Literature Review. *Journal of Psychology*, 1(1), 21–32.
- Agusmar, A. Y., Vani, A. T., & Wahyuni, S. (2019). *Perbandingan Tingkat Stres pada Mahasiswa Angkatan 2018 dengan Angkatan 2015*

- Fakultas Kedokteran Universitas Baiturrahmah. Health & Medical Journal*, 1(2), 34–38. <https://doi.org/10.33854/heme.v1i2.238>
- Amira, I., Sriati, A., Hendrawati, & Chaerani, A. (2021). Literature Review: Intervensi dalam Menurunkan Kecemasan pada Mahasiswa. *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu Keperawatan, Analisis Kesehatan Dan Farmasi*, 21(2), 286–302.
- Andiani, W. (2021). *Butterfly Hug Meredakan Kecemasan dengan Memeluk Diri Sendiri* (1st ed.). UB Production.
- Arfatin Nurrahmah, M. P., Febri Rismaningsih, S.Pd.Si., M. S., Ul'fah Hernaeny, M. P., Linda Pratiwi. M.Pd, Wahyudin, M. P., Abdul Rukyut. M.Pd, Fitri Yati, A. Md.RO., SKM., M. P., Lusiani, S.Pd.Si., M. P., Dinar Riaddin, M. P., & Dr. Jan Setiawan, S.Si, M. S. (2021). Pengantar Statistika 1 (M. P. Suci Haryanti (ed.)). Media Sains Indonesia. Melalui<<https://books.google.co.id/books?id=Vm1XEAAAQBAJ>> [12/02/2025].
- Aristawati, A. R., Pratitis, N., & Ananta, A. (2020). Kecemasan akademik mahasiswa menjelang ujian ditinjau dari jenis kelamin. *Jurnal Penelitian Psikologi*, 1(01), 73–80.
- Arviani, H., Subardja, N. C., dan Perdana, J. C. (2021). *Mental Healing in Korean Drama "It's Okay to Not Be Okay"*. *JOSAR (Journal of Students Academic Research)*, 7(1), 32-44. <https://doi.org/10.35457/josar.v7i1.1532>.
- Astuti, N. A. (2024). *Butterfly Hug sebagai Teknik Relaksasi: Metode Efektif untuk Mengurangi Kecemasan Remaja*. *KONSELING: Jurnal Ilmiah Penelitian dan Penerapannya*, 133.
- Aulia, Azka Widi Zulfa, Yuliastuti, Estin, & Suyatno, Suyatno. (2024). Pengaruh Terapi Butterfly Hug terhadap Tingkat Kecemasan pada Remaja. *ASJN (Aisyiyah Surakarta Journal of Nursing)*, 1-8.
- Aulia, M. (2023). *Teknik butterfly hug dan rasa tawakal pada anak korban kdrf di kelurahan kalijudan, surabaya*.
- Ayu. (2023). *Definisi Butterfly Hug: Kaitannya dengan Depresi*. <https://organisasi.co.id/definisi-butterfly-hug-kaitannya-dengan-depresi/>
- Azwar, S. (2019). Reliabilitas dan validitas. *Pustaka Pelajar*
- Beka Dede, E. V., Mola, S. A. S., & Nabuasa, Y. Y. (2022). Implementasi Hamilton Anxiety Rating Scale untuk Mendiagnosis Tingkat Kecemasan pada mahasiswa Dalam Penyusunan Skripsi. *Jurnal Komputer Dan Informatika*, 10(1), 55–64. <https://doi.org/10.35508/jicon.v10i1.6353>
- Caturini, E., Safitri, N. D., & Sugi, S. (2023). *The Effectiveness of Butterfly Hug in Reducing Anxiety Long-Distance Relationship (LDR) with Parents in Nursing Students. Basic and Applied Nursing Research Journal*, 4(1), 9–19. <https://doi.org/10.11594/banrj.04.01.02> ed.). Penerbit Alfabeta.
- Giatika, C., & Aldino, T. (2019). Aplikasi Pengukuran Tingkat Kecemasan Berdasarkan Skala Hars Berbasis Android. *Jurnal Teknik Komputer AMIK BSI*, 5(2), 277–282. <https://doi.org/10.31294/jtk.v4i2>.
- Haidar, S. A., de Vries, N. K., Karavetian, M., & El-Rassi, R. (2018). Stress, anxiety, and weight gain among university and college students: A systematic review. *Journal of the Academy of Nutrition and Dietetics*, 118(2), 261–274. <https://doi.org/10.1016/j.jand.2017.10.015>.

- Hartato, U., & Aisyah, M. N. (2011). Faktor-Faktor yang Mempengaruhi Penyelesaian Skripsi Mahasiswa Pendidikan Akuntansi Universitas Negeri Yogyakarta. *Prosiding Seminar Nasional*, 131–139.
- Helpiyani, H., Jumaini, & Erwin. (2019). *Gambaran Tingkat Stress Akademik Mahasiswa Keperawatan Dalam Menyusun Skripsi*. *JOM FKp*, 6(1), 363–369.
- Jusuf, H., Adityaningrum, A., & Yunus, R. (2022). *Determinan Kejadian Gastritis Pada Mahasiswa*. *Jambura Health and Sport Journal*, 4(2), 108–118. <https://doi.org/10.37311/jhsj.v4i2.15171>
- KBBI (Kamus Besar Bahasa Indonesia). Kamus versi online/daring (Dalam Jaringan). Melalui <<https://kbbi.kemdikbud.go.id/entri/mahasiswa>> [12/02.2025]
- Kinanthi, M. R., Listiyandini, R. A., Amaliah, U. S., Ramadhanty, R., & Farhan, M. (2020). Adaptasi alat ukur DASS 21 versi Indonesia pada populasi mahasiswa. Seminar Nasional Psikologi dan Call for Paper UMB Yogyakarta 2020. Universitas Mercu Buana. https://www.researchgate.net/publication/339616412_Adaptasi_Alat_Ukur_DASS-21_Versi_Indonesia_pada_Populasi_Mahasiswa.
- Kusumadewi, S., Wahyuningsih, H., Informatika, T., Indonesia, U. I., Indonesia, U. I., & Korespondensi, P. (2020). *Model Sistem Pendukung Keputusan Kelompok Untuk Penilaian Gangguan Depresi, Kecemasan Dan Stress Berdasarkan Dass-42 Group Decision Support System Model for Assessment of Depression, Anxiety and Stress Disorders Based on Dass-42*. 7(2), 219–228. <https://doi.org/10.25126/jtiik.202071052>
- Maria D, R. B. (2022). *Motivasi dan tingkat kecemasan mahasiswa mengerjakan skripsi*. 75-82, 12(4).
- Marisca Agustina. (2022). *Terapi Musik Lullaby terhadap Tingkat Kecemasan pada Masa Pandemi Covid-19 di Cianjur Jawa Barat*. *Jurnal Pengabdian Masyarakat Saga Komunitas*, 2(1), 130–134.
- Muhammad A, D., Rosyidawati, N. H., Sudrajat, A. A., Khairunnisa, N. H., Rahmawati, B. D. Z., Khatimah, W. H., Apriyani, P., Andriani, A. P. D., Widyastuti, P. A., Suryani, D. S., Nur Azizah, P. F. S., & Yuniasih, D. (2021). *Anxiety of Final Semester Students: Mini Review*. *Ahmad Dahlan Medical Journal*, 2(2), 85–92. <https://doi.org/10.12928/admj.v2i2.5432>.
- Muslimahayati, M., & Rahmy, H. A. (2021). *Depresi dan Kecemasan Remaja Ditinjau dari Perspektif Kesehatan dan Islam*. *DEMOS: Journal of Demography, Ethnography and Social Transformation*, 1(1), 35–44. <https://doi.org/10.30631/demos.v1i1.1017>
- Muyasaroh, H. (2020). Kajian Jenis Kecemasan Masyarakat Cilacap dalam menghadapi Pandemi Covid-19. *LP2M UNUGHA Cilacap*. Nomor, V., Jiwa, K., Psikososial, D. A. N., Pengemudi, P., & Online, O. (2020). *Jurnal Peduli Masyarakat*. 2, 59–64.
- Naspufah, M., Saprudin, A., & Heriana, Y. (2022). *Terapi butterfly hug terhadap tingkat kecemasan dalam penyusunan skripsi pada mahasiswa keperawatan di Sekolah Tinggi Ilmu Kesehatan Kuningan tahun 2022*. *Braz Dent J.*, 33(1), 1–12.
- Nordin, R. B., Kaur, A., Soni, T., & Por, L. K. (2017). Construct validity and internal consistency reliability of

- the Malay version of the 21-item Depression Anxiety Stress Scale (Malay-DASS-21) among male outpatient clinic attendees in Johor. *Medical Journal of Malaysia*, 72(5), 264–270
- Novitria, F., & Khoirunnisa, R. N. (2020). Perbedaan Kecemasan Akademik Pada Mahasiswa Baru Jurusan Psikologi Ditinjau Dari Jenis Kelamin. *Jurnal Penelitian Psikologi*, 9(1), 11–20.
- Onie, S., Kirana, A. C., Alifan, A., Mustika, N. P., Adesia, V., & Ibrahim, R. (2020). Assessing the predictive validity and reliability of the DASS-21, PHQ-9 and GAD-7 in an Indonesian sample. *PsyArXiv Preprints*, 1–18. <https://doi.org/10.31234/osf.io/eqcm9>
- Perceka, A. L. (2020). Hubungan motivasi dan dukungan keluarga dengan keinginan mahasiswa S1 keperawatan semester 8 untuk meneruskan program profesi ners. *Jurnal Imiah Pendidikan Dan Pembelajaran*. <https://ejournal.undiksha.ac.id/index.php/JIPP/article/view/23063>
- Perceka, A. L., Erlinawati, N. A., & Rusyani, H. (2021). Hubungan Konsep Diri Dengan Prestasi Akademik Mahasiswa Semeseter 8 Program Studi S1 Keperawatan STIKes Karsa Husada Garut. *Jurnal Medika Cendikia*. <https://www.jurnalskhg.ac.id/index.php/medika/article/view/170>
- Pramudita, Manikya Cynthia, Ira Wirasari, and Sri Nurbani. 2021. “Perancangan Kampanye Kesehatan Pencegahan Social Anxiety Melalui Pengurangan Negative Thoughts Pada Remaja Designing a Social Anxiety Prevention Health Campaign through Reducing Negative Thoughts in Adolescents.” *e-Proceeding of Art & Design* 7(1): 38–43.
- Purnomo, Z. A., & Arumi, S. M. (2024). Future Anxiety Mahasiswa Tingkat Akhir Ditinjau Dari Gender. *Jurnal Psikologi Dan Bimbingan Konseling*, 4(1), 0–4.
- Purwanti, T. (2021). butterfly Hug. D.I. Yogyakarta: *Buku Mojok*.
- Putri, L. (2023). *Pengaruh Metode Self-Healing Dengan Tehnik Butterfly Hug terhadap Kecemasan Pasien Pre Operasi Sectio Caesarea di RSUD Ibu Fatmawati Soekarno Surakarta*. Universitas Kusuma Husada Surakarta
- Rafie, Rakhmi. 2021. “Perbedaan Metode Afirmasi Diri Dan Konseling Untuk Pencegahan Kecemasan Menghadapi Tes (Test Anxiety) Pada Mahasiswa Kedokteran Di Universitas Malahayati.” *Jurnal Kebidanan Malahayati* 7(1): 123–30.
- Ramdan, I. M. (2019). Reliability and Validity Test of the Indonesian Version of the Hamilton Anxiety Rating Scale (HAM-A) to Measure Work-related Stress in Nursing. *Jurnal Ners*, 33–40.
- Ratnaningtyas, T. O., & Fitriani, D. (2019). Hubungan Stres Dengan Kualitas Tidur Pada Mahasiswa Tingkat Akhir. *Edu Masda Journal*, 3(2), 181. <https://doi.org/10.52118/edumasda.v3i2.40>
- RISKESDAS. 2018. Laporan Provinsi DKI Jakarta Riskesdas 2018 I. Badan Penelitian dan Pengembangan Kesehatan.
- Saifuddin, Ismail, M. S. & Wekke, I. S. (2018). *Strategi dan teknik penulisan skripsi*. Deepublish.
- Sari, R. P., Sherly, E., & Ruminem. (2021). Artikel Penelitian The Anxiety of School Children of 6-12 Years Old With Leukemia Through Chemotherapy In The Melati Room Abdul Wahab Sjahranie Hospital

- Samarinda. *Jurnal Kesehatan Pasak Bumi Kalimantan*, 4(1), 11–20.
- Setia, H. (2021) *Pengaruh Butterfly Hug Terhadap Tingkat Stres Mahasiswa Tingkat Empat (4) Program Studi Sarjana Keperawatan dalam Penyusunan Skripsi Di Stikes Bethesda Yakkum Yogyakarta*. Sekolah Tinggi Ilmu Kesehatan Bethesda Yakkum Yogyakarta.
- Setiawan Herno, Mukhlis Hamid, Wahyudi Dian Arif, & Rika, D. (2020). kualitas Hidup Ditinjau dari Tingkat Kecemasan Pasien Penderita Ulkus Diabetikum. *Majalah Kesehatan Indonesia*, 1(2), 33–38.
- Silalahi, E. R. D., Marbun, B. N., & Purba, J. M. (2023). Pengaruh Hipnotherapy Terhadap Penurunan Kecemasan. *Communnity Development Journal*, 4(2), 4132–4138.
- Siswa, P., Ix, K., Smp, D. I., & Palembang, N. (2024). *PENERAPAN TEKNIK BUTTERFLY HUG UNTUK MEREDAKAN KECEMASAN DALAM PEMBELAJARAN BAHASA INDONESIA*. 1(5), 403–410.
- Karsa Husada Health Science College Garut. (2024). *Panduan Penyusunan dan Penulisan Karya Ilmiah*. Garut : Karsa Husada Health Science College Garut.
- Stuart, dan Sundeen. (2007). *Buku Saku Keperawatan Jiwa*. Edisi 5. Jakarta: EGC.
- Sugiyono (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung : Alfabeta.
- Sugiyono (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung : Alfabeta.
- Sugiyono (2022). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung : Alfabeta.
- Tasalim, R, & Cahyani, A. R. (2021). *Stres Akademik dan Penanganannya*. Guspedia
- Taylor. (2018). *Health Psychology*. New York: Mc Graw-Hill Education.
- Yulianti R, A. R. (2020). *Jurnal kesehatan. jurnal kesehatan*, 10-15, 8(1).
- Zainurridha, Y. A., Jannah, M., Afton, A. A., & Fithriyati, U. (2024). *penerapan Tekhnik Butterfly Hug untuk Menurunkan Tingkat Kecemasan pada Penderita Tuberkulosis Paru Berbasis Self Care*. 183–187.
- Zulkifli, Z. (2022). *Proses Penulisan Karya Ilmiah pada Mahasiswa di Era Digital*. *Jurnal Ilmiah Teknologi Pendidikan*, 7(1), 1-10.
- Zurrahmi, Hardianti, S., & Syahasti, F. M. (2021). Hubungan Tingkat Stres dengan Kualitas Tidur pada Mahasiswa Akhir S1 Kesehatan Masyarakat Universitas Pahlawan Tuanku Tambusai. *Jurnal Assyifa' Ilmu Keperawatan Islami*, 6(2), 963–968